

STAVATTI™

TURBOFAN COIN/CAS

SM-27J/L Machete

MODEL

SM-27J MACHETE™ COIN/CAS/FAC
 SM-27L MACHETE™ COIN/FAC/CAS/Lead-In Trainer

ACCOMMODATION

SM-27J: Single Seat on MK.16E Ejection Seat
 SM-27L: Two Seat Tandem on MK.16E Ejection Seats

POWERPLANT

Number	Single Engine
Model	GEAE Non-Afturburning F414 Turbofan
Thrust	14,756 lbs SL Static Thrust

INTERNAL DIMENSIONS

SM-27J TURBOFAN MACHETE (Single Place)

Cabin Length	67 in
Cabin Height-Maximum	61 in
Cabin Width-Maximum	32 in

SM-27L TURBOFAN MACHETE (Two Place Tandem)

Cabin Length	124 in
Cabin Height-Maximum	62 in
Cabin Width-Maximum	32 in

WEIGHTS & CAPACITIES

SM-27J TURBOFAN MACHETE (Single Place)

Dry Empty Weight	12,202 lbs
Maximum Useful Internal Fuel	6,000 lbs (JP-8)
Maximum External Load/Warload	8,000 lbs
Clean Take-Off Weight (CTOW)	19,605 lbs
Typical Combat Weight (TCW)	21,105 lbs
Maximum Take-Off Weight (MTOW)	27,605 lbs

SM-27L TURBOFAN MACHETE (Two Place Tandem)

Dry Empty Weight	12,745 lbs
Maximum Useful Internal Fuel	6,000 lbs (JP-8)
Maximum External Load/Warload	8,000 lbs
Clean Take-Off Weight (CTOW)	20,086 lbs
Typical Combat Weight (TCW)	21,586 lbs
Maximum Take-Off Weight (MTOW)	28,086 lbs

EXTERNAL DIMENSIONS & AREAS

Overall Dimensions (All Models)

Span	50 ft 0 in
Length	38 ft 0 in
Height	12 ft 9 in
Gross Wing Area	280 sq ft

Wing (All Models)

LE Sweep	5°
Span	47 ft 0 in
Area	243.4 sq ft
Aspect Ratio	9.08

Canard (All Models)

LE Sweep	36°
Span (Unit)	6 ft 0 in
Area	36.4 sq ft
Aspect Ratio	4.03

Horizontal Tail (All Models)

LE Sweep	34°
Span (Unit)	10 ft 4 in
Area	88.5 sq ft
Aspect Ratio	2.39

Vertical Tail (All Models)

LE Sweep	40°
Span (Unit)	6 ft 6 in
Area	58.3 sq ft
Aspect Ratio	2.88

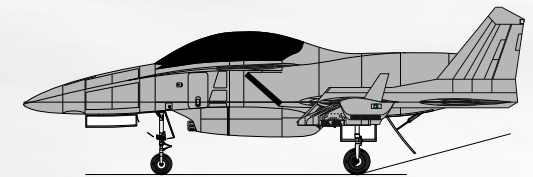
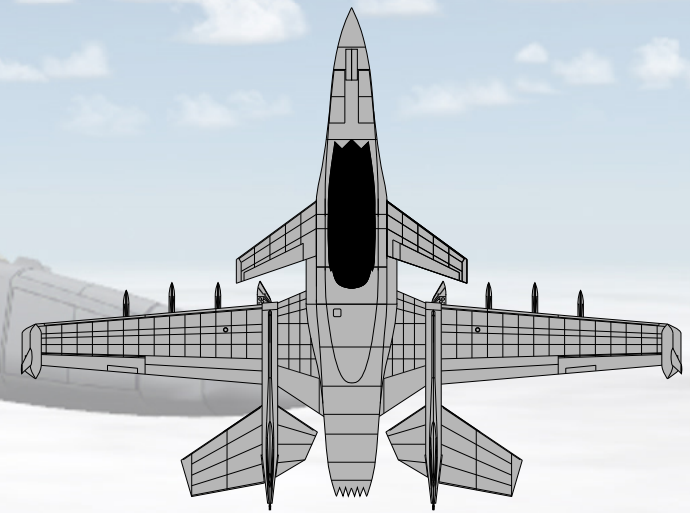
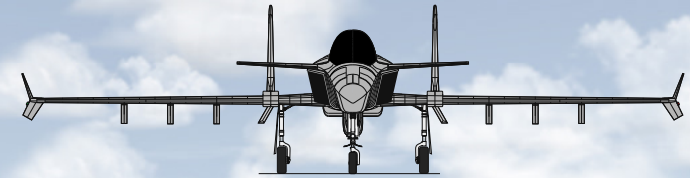
Landing Gear (All Models)

Wheel Base	14 ft 11 in
Wheel Track	10 ft 9 in
Nose/Main Weight Distribution	15% - 85%

LOADINGS (All Models)

Wing Loading @ MTOW	100 lbs/sq ft
Thrust-to-Weight @ MTOW	0.53 to 1.00

Design Load Factor-CTOW	+10.5/-5.3
Design Load Factor-MTOW	+7.5/-3.75



STAVATTI™

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FLYAWAY COST

SM-27J: \$16,000,000 to \$20,000,000 USD
SM-27L: \$17,000,000 to \$21,000,000 USD

All unit cost estimates are driven by actual aircraft avionics and systems configurations as selected by customer.

AVAILABILITY

LRIP in 2013-2014 @ 25 Units Annually
FRP in 2014-2015 @ 100+ Units Annually

PERFORMANCE & HANDLING

Performance estimates are based upon a standard SM-27J/L aircraft at CTOW or MTOW. MTOW configuration representative of a load including 4 x GBU-12, 2 x BRU-61, 12 x GBU-39 SDB, 2 x AIM-9 under ISA, standard day conditions. Takeoff and landing field lengths are based on level, hard surface runways with zero wind. Ferry range is with 2 x 330 USG external tanks.

Max Level Speed @ SL	575 Ktas/0.87 Mach
Max Level Speed @ 15,000 ft	545 Ktas/0.87 Mach
Max Level Speed @ 25,000 ft	525 Ktas/0.87 Mach
Max Level Speed @ 35,000 ft	500 Ktas/0.87 Mach
Max Cruise Speed @ 15,000 ft	530 Ktas/0.85 Mach
Max Cruise Speed @ 25,000 ft	510 Ktas/0.85 Mach
Max Cruise Speed @ 35,000 ft	490 Ktas/0.85 Mach
Cruise Speed @ 15,000 ft	500 Ktas/0.80 Mach
Cruise Speed @ 25,000 ft	480 Ktas/0.80 Mach
Cruise Speed @ 35,000 ft	460 Ktas/0.80 Mach
Loiter Speed @ SL	192 Ktas/0.29 Mach
Loiter Speed @ 15,000 ft	242 Ktas/0.39 Mach

Stall Speed Flapped @ SL-CTOW	102 Ktas
Approach Speed Flapped @ SL-CTOW	112 Ktas
Stall Speed Flapped @ SL-MTOW	120 Ktas
Approach Speed Flapped @ SL-MTOW	133 Ktas
Best Climb Speed @ SL	430 Ktas
Max Climb Rate @ SL-CTOW	21,604 ft/min
Max Climb Rate @ SL-MTOW	15,190 ft/min
Service Ceiling Exceeds	50,000 ft
Tactical Radius; Hi-Lo-Hi, Internal Fuel	735 nm
Max Cruise Range, Internal Fuel	1,550 nm
Max Cruise Range, 2 x 150 USG Tanks	1,800 nm
Max Ferry Range, 2 x 330 USG Tanks	2,400 nm

Takeoff Distance @ SL-CTOW	1,304 ft
Landing Distance @ SL-CTOW	1,354 ft
Takeoff Distance @ SL-MTOW	2,682 ft
Landing Distance @ SL-MTOW	1,907 ft

AVIONICS & SYSTEMS

Actual avionics & systems are selected and configured per customer requirements, pending export approval from DDTC. Avionics and systems as specified are for general information purposes only and are configured for export to a NATO Air Force.

Avionics & Sensors

Data-Bus: MIL-STD-1553B
Primary VFRI: HMD or CMC Night Hawk HUD
Mission Computer: GD 3000 AMC
MMDP: CMC FV-4000 MMDP
EFIS: 5 x L3 6 in x 8 in MFD FPLCDs
WDNS: GD SMS Stores Management System
Radar: Lockheed Martin AN/APG-67(V4)
Radio Option 1: AN/ARC-210(V) Integrated Comm
Radio Option 2: AN/ARC-232(V) STARBLAZER Comm
NVG Gen III-IV: Stavatti NVG Compliant Cockpit
Data Link: AN/URC-138 Link 16 Low Volume Terminal
Intercom: Andrea Systems A301-412
IFF Transponder Option 1: AN/APX-113(V) CIT
IFF Transponder Option 2: AN/APX-121(V) IFF
Radar Altimeter: APN-194 Radar Altimeter
GPS/INS: LN 260 Advanced Embedded INS/GPS
TACAN Option 1: AN/ARN-153(V) TACAN (TCN 500)
TACAN Option 2: AN/ARN-154(V) TACAN
VOR/ILS: AN/ARN-147V VOR/ILS/GS/MB
ADF: KR 87 ADF

Electronic Countermeasures

RF ECM: AN/ALQ-211(V)4 AIDEWS
RWR: AN/ALR-56M Advanced Radar Warning Receiver
MAWS: Raytheon AN/AAR-58 Advanced MAWS
SPJ: AN/ALQ-165 ASPJ
Chaff/Flare Dispensers: 14 x AN/ALE-47

Systems & Features

HOTAS: Mason Electric HOTAS Flight Grips
Dual Controls/Instruments: SM-27L Standard
Cockpit Data Recorder: L3 Communications FA2100
Cockpit OBOGS: Carlton OC1132 OBOGS
Fuel Tank OBOGS: Carlton NC1029 OBOGS
Aircraft Armor: 500 lbs Spectra® 2000/Titanium
Canopy: Birdstrike/Projectile Resistant Polycarbonate

SERVICEABILITY

MTBF: 14.36 Hours
MMH/FH: 5.07 Hours

ARMAMENT

External

8,000 lbs External Stores Load with 100% Internal Fuel;
 10,000 lbs External Stores Load with 70% Internal Fuel
 8 x External Stores Hardpoints; 14-in Suspension

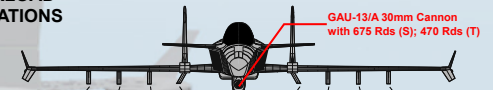
Internal

1 x Internal Centerline GD GAU-13/A 30mm w/675 rds (J)
 1 x Internal Centerline GD GAU-13/A 30mm w/470 rds (L)

Tanks & Pods

4 x Sargent Fletcher 150 USG Tank #401315
 4 x Sargent Fletcher 330 USG Tank #74A551200-1001
 • Interface for SNIPER Advanced Targeting Pod
 • Interface for RAFAEL Litening III FLIR/Targeting
 • Interface for AN/ALQ-184 External ECM Pod
 • Interface for AN/ALQ-131(V) External ECM Pod

SM-27J/L WARLOAD & STORES STATIONS



STATION NUMBER	1	2	3	4	5	6	7	8
AIM-9 Sidewinder	×	×	×			×	×	×
AGM-65 Maverick	☼	☼	☼	☼	☼	☼	☼	☼
GBU-39/B SDB	☼	☼	☼	☼	☼	☼	☼	☼
GBU-38 JDAM/Mk.82	☼	☼	☼	☼	☼	☼	☼	☼
GBU-32 JDAM/MK.83	☼	☼	☼	☼	☼	☼	☼	☼
GBU-31 JDAM/Mk.84		☼	☼	☼	☼	☼	☼	
GBU-12 PAVEWAY II	☼	☼	☼	☼	☼	☼	☼	☼
GBU-24 PAVEWAY III		☼	☼			☼	☼	
CBU-97/105 SFW	☼	☼	☼	☼	☼	☼	☼	☼
AGM-84E SLAM		☼	☼			☼	☼	
AGM-88C HARM		☼	☼			☼	☼	
AGM-154 JSOW		☼	☼			☼	☼	
LAU-61C Rocket Pod	☼	☼	☼	☼	☼	☼	☼	☼
LAU-10C Rocket Pod	☼	☼	☼	☼	☼	☼	☼	☼
M134D Gun Pod		☼	☼	☼	☼	☼	☼	
150 USG External Tank		☼	☼			☼	☼	

Rated Load @ 7.5g	1,000 lbs	2,500 lbs	2,500 lbs	2,000 lbs	2,000 lbs	2,500 lbs	2,500 lbs	1,000 lbs